REMARKS

The Office Action dated January 10, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-15, 32, 37, and 40-42 have been amended to more particularly point out and distinctly claim the invention. Claims 43-59 have been added. Claims 16-31 and 33-36 have been cancelled without prejudice or disclaimer. No new matter has been added.

Claims 1-15, 32, 37, and 40-59 are currently pending in the application, of which claims 1, 15, 32, 37, and 40-42 are independent.

REJECTION UNDER 35 U.S.C. § 112:

In the Office Action, claims 1, 15, 37, and 40-42 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness.

In response, the claims have been amended to more particularly point out and distinctly claim the invention.

Accordingly, it is respectfully requested that the § 112, second paragraph rejections to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 103:

On page 3 of the Office Action, claims 1-3, 6, 8-11, 13-17, 20, 22-37, and 39 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komandur ("Komandur") in view of U.S. Patent No. 6,161,016 to Yarwood ("Yarwood"). It is respectfully asserted that, for at least the reasons provided herein below, Komandur and Yarwood fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

Independent claim 1, upon which claims 2-14 are dependent, recites a system, including at least one access network configured to provide a wireless interface between a mobile device and the at least one access network for communication of packet data, and a core network comprising at least one core network node configured to support communication of packet data on the wireless interface and configured to release a data communication link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device. The system also includes a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface, and, when the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node.

Independent claim 15 recites a method, including establishing a data communication link via an access network of a data communication system to a mobile device on a wireless interface between the access network and the mobile device, and sending one or more messages from a core network node of the data communication system to the mobile device via the access network, wherein the core network is configured to release said data communication link in the absence of a response to said one or more messages. The method also includes detecting at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met, and subsequent to such detection, generating at the controller and sending to the core network node one or more messages in response to said one or more messages from the core network node.

Independent claim 32 recites a method, including establishing a data communication link via an access network of a data communication system to a mobile device on a wireless interface between the access network and the mobile device, and sending one or more messages from a core network node of the data communication system to the mobile device via the access network, wherein the core network node is configured to release said data communication link in the absence of a response to said one or more messages. The method also includes detecting at a controller provided in association with the access network that the mobile device is out of reach, notifying said core network node that the mobile device is out of reach, and in response to receiving the

notification, retaining said data communication link but pausing from sending further data packets from the core network node to the mobile device and processing the data packets in accordance with a predefined policy.

Independent claim 37 recites a system, including establishing means for establishing a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device, and first sending means for sending one or more messages from a core network node of the data communication system to the mobile device via the access network, wherein the core network node is configured to release said data communication link in the absence of a reply to said one or more messages. The system also includes detection means for detection at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met, and second sending means for sending a further message from the controller to the core network node subsequent to such detection, wherein the core network node postpones the release of said release link in response to such a further message.

Independent claim 40 recites a system, including an establishing unit configured to establish a data communication link via an access network of the data communication system to a mobile device on a wireless interface between the access network and the mobile device, and a first sending unit configured to send one or messages from a core network node of the data communication system to the mobile device via the access

network. The core network node is configured to release said data communication link in the absence of a reply to said one or more messages. The system also includes a detector configured to detect at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met, and a second sending unit configured to send a further message from the controller to the core network node subsequent to such detection, wherein the core network node postpones the release of said release link in response to such a further message.

Independent claim 41, upon which claims 43-52 are dependent, recites an apparatus, including a monitor configured to monitor at least one condition associated with the wireless interface. The apparatus is associated with at least one access network via which a data communication link is established between the mobile device and a core network node configured to release said data communication link in the absence of a response to said one or more messages directed to the mobile device. The apparatus includes a generator/transmitter configured to, in response to an indication that the at least one condition is not met, generate on behalf of the mobile device and transmit to the core network node one or more messages in response to said one or more messages from the core network node, or configured to, in response to an indication that the at least one condition is not met, generate and transmit to the core network node a message in response to which the core network node postpones release of said data communication link.

Independent claim 42, upon which claims 53-59 are dependent, recites a method including monitoring at least one condition associated with a wireless interface constituting part of a communication link between a mobile device and a core network node configured to release said data communication link in the absence of a response to one or more messages directed to the mobile device, said at least one condition comprising a condition. In response to an indication that the at least one condition is met, the method includes either generating on behalf of the mobile device and sending to the core network node one or more messages in response to said one or more messages from the core network node or otherwise sending a message to the core network node in response to which the core network node postpones release of said data communication link.

As will be discussed below, Komandur and Yarwood fail to disclose or suggest the elements of any of the presently pending claims.

According to Komandur, if the mobile station becomes unreachable, the wireless content switch 115 stores the data packet in memory 155, prior to transmission to the mobile station 125. See paragraph [0045] The wireless content switch 115 delays retransmission of the data packets until the reachability of the mobile station is determined. Once the mobile station is reachable, then a determination is made as to whether the retransmission timeout has occurred. If a retransmission timeout has occurred, then the "drain the packet" function is implemented.

According to the Response to Arguments (Response I) section, it is considered that such description of Komandur teaches "a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface, and, when the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node," as recited in independent claim 1. Assuming, *arguendo*, that the controller recited in independent claim 1 corresponds to the wireless content switch 115, Komandur does not provide any description or suggestion in paragraph [0045] or in any other portion thereof that the wireless content switch 115 *generates and sends to the core network node* one or more messages *in response to* one or more of said one or more messages from the core network node. The Office Action submitted that paragraph [0032] of Komandur describes "a core network comprising at least one core network node configured to support communication of packet data on the wireless interface," as recited in independent claim 1. However, paragraph [0032] of Komandur limits its description to providing a wireless network 120 transmitting packet data over a wireless air interface to a mobile station 125. There is no description in Komandur that the wireless content switch 115 generates and sends to the wireless network 120 one or more messages in response to one or more of said one or more messages from the wireless network 120. Applicant respectfully submits that the description of Komandur is deficient.

Furthermore, in the Response to Arguments (Response I) section, it is submitted that "the fact that the network responded to each of these conditions (e.g. storing data) is evidence that the same network has knowledge or received message/notification about the mobile device." As previously submitted, it appears that the Office Action is taking the view that the wireless content switch 115 (which is stated at section [0045] to store a data packet in a memory if the mobile station becomes reachable) can be considered to be part of a core network, and that it follows that it receives a message from a base station when the base station determines that the mobile station is not reachable. However, contrary to the contentions made in the Office Action, (i) there is no teaching or suggestion in Komandur that the wireless content switch 115 is a node that controls the retention or release of a communication link; and (ii) the description provided in Komandur that the wireless content switch 115 stores a data packet in a memory if the mobile station becomes unreachable would not be construed by a person of ordinary skill in the art of being a teaching or suggestion of sending one or more messages to the network node that controls the release or retention of the communication link, and, particularly, not in reply to one or more messages from such a node to which the absence of a response would result in release of the communication link.

In addition, as submitted in the Office Action, Yarwood is used to correct the deficiencies of Komandur by allegedly teaching the release of "a data communication

link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device," as recited in independent claim 1.

In the Response to Arguments (Response III) section, the Office Action submits that Yarwood is carried out by a base station, and that the channel releasing is made by a broadcast center. However, contrary to the contentions made in the Office Action, column 7, lines 41 to 52 of Yarwood does not teach or suggest sending any message from the base station to the broadcast centre when a paging attempt fails to get a response; in particular, it does not teach or suggest (i) a broadcast centre directing messages to the mobile station to which the absence of a response would result in the broadcast centre releasing a communication link with the mobile device; and (ii) a base station informing the broadcast centre that the mobile device is out of reach (on the basis that the mobile station has not responded to successive paging attempts from the base station), and the broadcast centre nevertheless retaining the communication link with the mobile device despite such notification from the base station that the mobile device is out reach. Rather, Yarwood focuses on allocating a single channel to the broadcast service, irrespective of the number of mobile units in the cell, and not allocating a channel to a cell when there is no respond to a paging signal in that cell. Yarwood does not provide any description or suggestion of a generation or sending to the core network node of "one or more messages in response to one or more of said one or more messages from the core network node," as recited in independent claim 1.

Applicant respectfully submits the present claims relate to a technique where a core network node that controls the release or retention of a communication link directs to the mobile device messages to which the absence of a response would result in the release of the communication link. Neither Komandur nor Yarwood describes such configuration. In Komandur, there is no teaching or suggestion as to which node controls the release or retention of the communication link, and there is no teaching or suggestion of such a node directing to the mobile device messages to which the absence of a response would result in release of the communication link. For Yarwood, the Office Action submits that the broadcast centre is considered to be the node that controls the release or retention of the communication link. However, Applicant respectfully submits that there is no evidence in Yarwood that would lead a person of ordinary skill in the art to construe the broadcast center to be directing to the mobile device messages to which the absence of a response would result in release of the communication link.

Because independent claims 15, 32, 37, and 40-42 include similar claim features as those recited in independent claim 1, although of different scope, and because the Office Action refers to similar portions of the cited references to reject independent claims 15, 32, 37, and 40-42, the arguments presented above supporting the patentability of independent claim 1 are incorporated herein to support the patentability of independent claims 15, 32, 37, and 40-42.

Therefore, in addition to the arguments submitted in the Response filed on October 12, 2007, contrary to the contentions made in the Response to Arguments (Response I) section, the combination of Komandur and Yarwood would not disclose or suggest all of the elements of any of the presently pending claims.

In view of the foregoing, it is respectfully requested that independent claims 1, 15, 32, and 37 and related dependent claims be allowed. Withdrawal of the rejection is respectfully requested.

Claims 4, 5, 18, and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komandur, Yarwood, and further in view of U.S. Patent No. 7,154,903 of Sivalingham ("Sivalingham"). It is respectfully asserted that, for at least the reasons provided herein below, Komandur, Yarwood, and Sivalingham fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

Claim 18 and 19 have been cancelled, therefore, the rejections to these claim are considered moot. Furthermore, claims 4-5 depend from, and further limit, independent claim 1.

The description and arguments presented above supporting the patentability of independent claim 1 over Komandur and Yarwood are incorporated herein. Sivalingham generally describes a system and a method of buffering packet data associated with dormant mobile terminals at a packet control function (PCF) in a wireless communication

network. The PCF uses a reactivation timer to limit the amount of memory used for buffering data, and to reduce network signaling overhead associated with attempted reactivation of a dormant mobile terminal. A reactivation cycle begins when the PCF receives incoming data for a dormant mobile terminal. The PCF starts a reactivation timer, begins buffering the incoming data, and initiates connection reestablishment with the dormant mobile terminal. If the connection is reestablished before expiration of the timer, the PCF transfers the buffered data to the terminal; otherwise, the data is discarded. Also, any data received during the cycle in excess of a defined buffer limit is discarded.

However, Sivalingham does not cure the deficiencies in Komandur and Yarwood, as Sivalingham also does not disclose "a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface, and, when the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node," as recited in independent claim 1. Thus, the combination of Komandur, Yarwood, and Sivalingham does not disclose or suggest all of the elements of independent claims 1 and 15. Additionally, claims 4-5 should be allowed for at least their dependence upon independent claim 1, and for the specific limitations recited therein. It is respectfully requested that the rejection be withdrawn.

Claims 7 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Komandur, Yarwood, and further in view of U.S. Publication No. 2002/0057658 A1 of Lim ("Lim"). It is respectfully asserted that, for at least the reasons provided herein below, Komandur, Yarwood, and Lim fail to teach or suggest the recitations of the pending claims. Reconsideration is requested.

Claim 21 has been cancelled, therefore, the rejection to this claim is considered moot. Claim 7 depends from, and further limit, independent claim 1.

The description and arguments presented above supporting the patentability of independent claim 1 over Komandur and Yarwood are incorporated herein. Lim generally describes a method for serving a packet dormant handoff is disclosed, including determining with a mobile switching center whether a mobile station performs a dormant handoff into an area of a destination base station controller/packet controller function (BSC/PCF) and providing information of the dormant handoff from the mobile switching center to an original BSC/PCF, when the mobile station performs the dormant handoff.

However, Lim does not cure the deficiencies in Komandur and Yarwood, as Lim also does not disclose "a controller provided in association with the at least one access network and configured to monitor at least one condition associated with the wireless interface, and, when the monitoring indicates that the at least one condition is met, to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node," as recited in

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independent claim 1. Thus, the combination of Komandur, Yarwood, and Lim does not disclose or suggest all of the elements of independent claim 1. Additionally, claim 7 should be allowed for at least their dependence upon independent claim 1, and for the specific limitations recited therein. It is respectfully requested that the rejection be withdrawn.

CONCLUSION

For the reasons explained above, it is respectfully submitted that each of claims 1-15, 32, 37, and 40-59 recite subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-15, 32, 37, and 40-59 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for

an appropriate extension of time.

Respectfully submitted,

Alicia M. Choi
Registration No. 46,621

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

AMC:dc